

WHAT IS CLAIMED IS:

1. A hub-bearing assembly for the wheel of a motor vehicle,
of the type where the hub (1) forms integrally or is securely
5 fixed to a radial flange (7) to be fastened to a wheel (8),
wherein, associated with the assembly is a measuring device
(14) mounted on a non-rotating part (12) of the vehicle and
operatively facing an essentially radial surface (13) secured
to or integral with the flange (7) for detecting real time
10 variations of the axial position of the surface (13) due to
elastic deformation of the flange (7) caused by forces
transmitted from the wheel (8) to the hub flange (7).

2. The assembly of claim 1, wherein the measuring device
15 (14) is an optical device and the surface (13) is an
optically reflecting surface.

3. The assembly of claim 2, wherein the measuring device
(14) includes
20 emitter means for projecting a light radiation onto the
reflecting surface (13) and
receiver means for receiving the light radiation
reflected back by the reflecting surface (13).

25 4. The assembly of claim 3, wherein the optical measuring
device (14) includes emitter means for emitting a laser beam.

5. The assembly of claim 1, wherein the measuring device
(14) is arranged for carrying out said measuring operation in
30 proximity of the peripheral zone of the hub flange (7).

6. The assembly of claim 1, wherein the surface (13) is
facing the inboard side of the vehicle.

7. The assembly of claim 1, wherein the measuring device (14) is fixable to a non-rotating race (12) of the bearing.

5 8. The assembly of claim 1, wherein the measuring device (14) is connected (15) to an electronic processing unit mounted on board of the vehicle and set for automatically controlling, based on the deformation signals received from the measuring device (14), the wearable members of the
10 braking system for adapting their position to the position of a rotor brake (5) rigidly connected to the flange (7) of the hub (1).

9. The assembly of claim 1, wherein the measuring device
15 (14) is connected (15) to an electronic processing unit mounted on board of the vehicle and set for recognizing, based on the deformation signals received from the measuring device (14), a condition indicative of an impending loss of adhesion with the road.

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10. The assembly of claim 1, wherein the measuring device (14) includes an inductive position sensor and that the essentially radial surface (13) is of a metallic material.